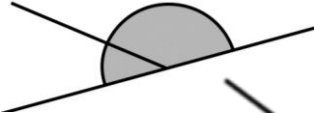

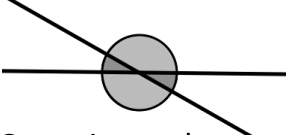
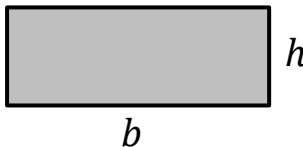
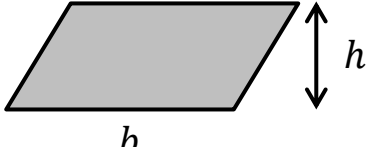
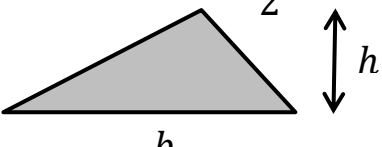


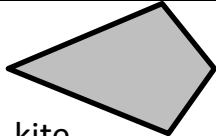

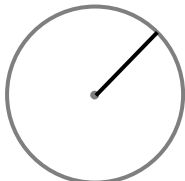
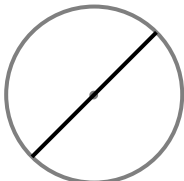
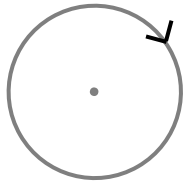
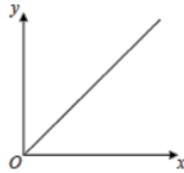
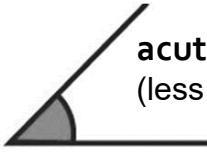

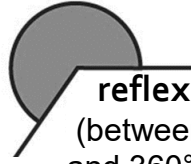

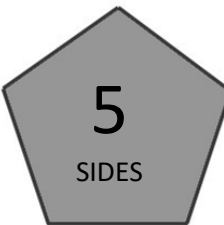


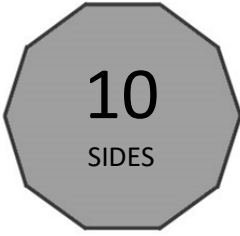
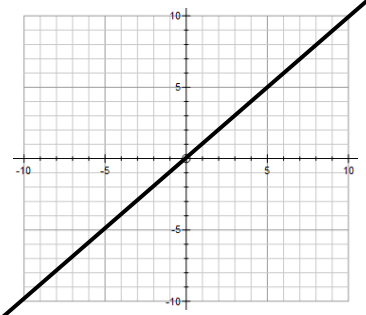
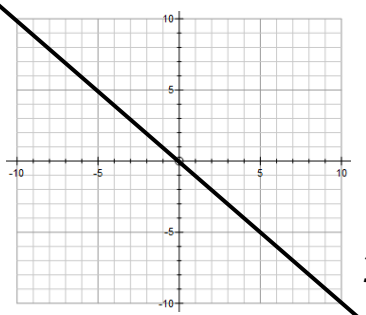
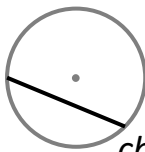
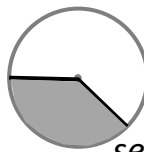
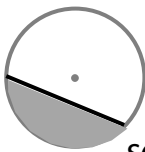
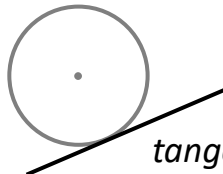
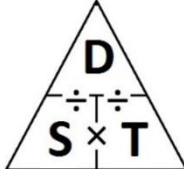
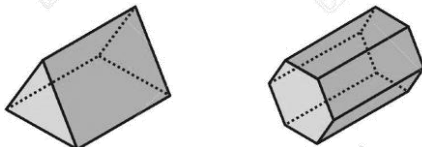


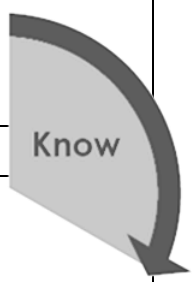
ESSENTIAL KNOWLEDGE FOR YEAR 10 (F/D)

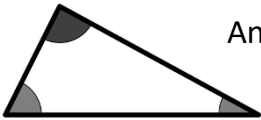
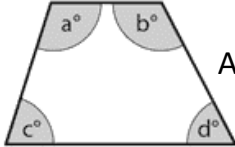
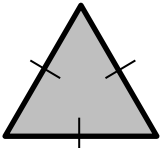
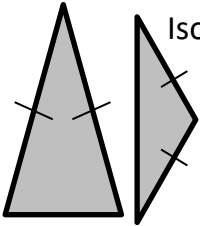
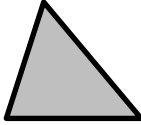
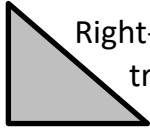
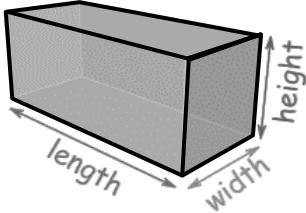

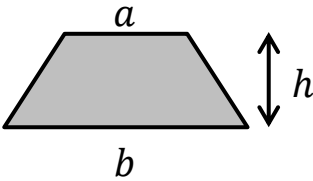
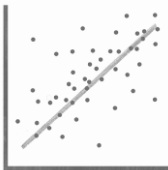
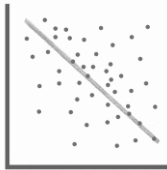
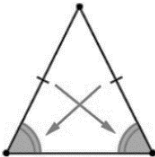
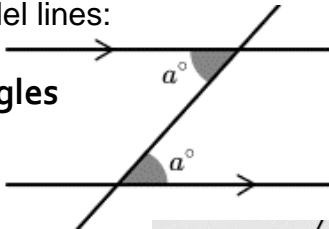
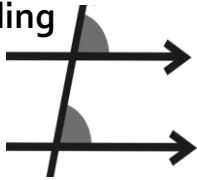
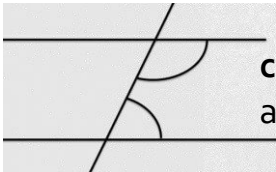
(LEARN THESE KEY FACTS FROM PREVIOUS YEARS)

Know

1.	Integer means 'whole number'
2.	Factorise means 'put into brackets'
3.	Units of length/distance: 1 km = 1000 m 1 m = 100 cm 1 cm = 10 mm
4.	The first ten square numbers are: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100
5.	The first five cube numbers are: 1, 8, 27, 64, 125
6.	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Angles on a straight line add up to 180°</p> </div> <div style="text-align: center;">  <p>Angles around a point add up to 360°</p> </div> <div style="text-align: center;">  <p>Opposite angles are equal</p> </div> </div>
7.	Product means 'multiply' (e.g. the product of 4 and 3 is 12)
8.	The multiples of a number are its times table (e.g. multiples of 10 are 10, 20, 30, ...)
9.	A factor goes into another number (e.g. the factors of 10 are 1 & 10, 2 & 5)
10.	A prime number has exactly two factors (1 and itself) Learn the first few primes: 2, 3, 5, 7, 11, 13, 17, 19, ...
11.	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p><u>Rectangle</u></p> <p>Area = $b \times h$</p>  </div> <div style="text-align: center;"> <p><u>Parallelogram</u></p> <p>Area = $b \times h$</p>  </div> <div style="text-align: center;"> <p><u>Triangle</u></p> <p>Area = $\frac{b \times h}{2}$</p>  </div> </div>
12.	A polygon is any shape with straight sides (e.g. triangle, hexagon, octagon)
13.	Bisect means 'cut exactly in half'
14.	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>parallelogram</p> </div> <div style="text-align: center;">  <p>trapezium</p> </div> <div style="text-align: center;">  <p>kite</p> </div> <div style="text-align: center;">  <p>rhombus</p> </div> </div>
15.	An expression is a combination of numbers or letters e.g. $5h$, $3a + 9b^2$ (An expression does not include an = symbol)
16.	An equation is a statement in algebra, including the = symbol, which is only true for certain values of the unknown e.g. $5x + 3 = 23$ is true when $x = 4$
17.	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>radius</p> </div> <div style="text-align: center;">  <p>diameter</p> </div> <div style="text-align: center;">  <p>circumference</p> </div> </div>
18.	In algebra, a coefficient is the number part of a term (e.g. in $4n^2 - 3n$, the coefficient of n^2 is 4 and the coefficient of n is -3.)
19.	Units of mass/weight: 1 kg = 1000 g 1 g = 1000 mg (milligrams)
20.	$\frac{1}{4} = 0.25 = 25\%$ $\frac{1}{2} = 0.5 = 50\%$ $\frac{3}{4} = 0.75 = 75\%$ $\frac{1}{5} = 0.2 = 20\%$

21.	<p>A graph showing direct proportion is:</p> <ul style="list-style-type: none"> - a straight line - with positive gradient - through the origin 				
22.	 <p>acute angle (less than 90°)</p>	 <p>obtuse angle (between 90° and 180°)</p>	 <p>reflex angle (between 180° and 360°)</p>		
23.	<p>The subject of a formula is the letter it starts with. (e.g. in the formula $H = 5m + d$, the subject is H.)</p>				
24.	 <p>4 SIDES</p> <p>Quadrilateral</p>	 <p>5 SIDES</p> <p>Pentagon</p>	 <p>6 SIDES</p> <p>Hexagon</p>	 <p>8 SIDES</p> <p>Octagon</p>	 <p>10 SIDES</p> <p>Decagon</p>
25.	<p>A regular polygon has <u>all equal sides</u> and <u>all equal angles</u></p>				
26.	<p>Units of capacity: 1 litre = 1000 ml 1 litre = 100 cl (centilitres)</p>				
27.	<p>Know these graphs:</p>  <p>$y = x$</p>	 <p>$y = -x$</p>			
28.	 <p>chord</p>	 <p>sector</p>	 <p>segment</p>	 <p>tangent</p>	
29.	<p>$C = d \times \pi$ to calculate the circumference of a circle</p>				
30.	<p>$A = r^2 \times \pi$ to calculate the area of a circle</p>				
31.	<p>< less than > greater than ≤ less than or equal to ≥ greater than or equal to</p>				
32.	<p>Learn the speed, distance, time triangle:</p> 				
33.	<p>Perimeter is the total distance around the outside of a shape</p>				
34.	<p>A prism has the same shape running all the way through the middle</p> 				



35.	Translate means 'move to a new position'			
36.	 <p>Angles in a triangle add up to 180°</p>	 <p>Angles in a quadrilateral add up to 360°</p>		
37.	 <p>Equilateral triangle (3 equal sides)</p>	 <p>Isosceles triangle (2 equal sides)</p>	 <p>Scalene triangle (no equal sides)</p>	 <p>Right-angled triangle</p>
38.	Volume of a cuboid	 <p>$Volume = l \times w \times h$</p>	 <p>Know</p>	
39.	Area of a trapezium	 <p>$Area = \frac{1}{2}(a + b)h$</p>		
40.	Ascending means 'going up' or 'getting bigger'			
41.	Descending means 'going down' or 'getting smaller'			
42.	 <p>positive correlation</p>	 <p>negative correlation</p>		
43.	An outlier is a genuine piece of data which doesn't fit the pattern of the rest of the data An anomaly is a piece of data which is a mistake			
44.	A plan view is looking down from above (a 'birds eye view')			
45.	Perpendicular means 'at right angles'			
46.	The base angles in an isosceles triangle are equal.			
47.	Converting between capacity and volume:	$1 \text{ cm}^3 = 1 \text{ ml}$ $1000\text{cm}^3 = 1 \text{ litre}$		
48.	Angles near parallel lines:	 <p>alternate angles are equal</p>  <p>corresponding angles are equal</p>  <p>co-interior angles add up to 180°</p>		